

REMARKS

Claims 1-10 are currently pending, of which Claim 1 is independent. Claims 11-21 are withdrawn from consideration as being directed to a non elected invention. All claims stand rejected. The rejections are traversed. Claims 1, 2, 4 and 8 are amended to claim the invention more distinctly.

Regarding Claim Rejections Under Section 112, ¶2

Claim 1 stands rejected under 35 USC §112, ¶2 because the limitations "the computer network" and "the indexable electronic documents" lacked sufficient antecedent basis. In response, Claim 1 is amended to claim the invention more distinctly. Reconsideration and withdrawal of the rejection are respectfully requested.

Regarding Claims Rejections Under Section 102

Claims 1-2 and 7-10 stand rejected under 35 USC §102 based on U.S. Patent No. 6,434,548 to Emens. The rejections under §103 are traversed.

The claimed invention set forth in Claim 1 is directed to an approach for creating an attribute bounded network of computers. In disclosed embodiments, a list of attribute bounded electronic addresses, such as URLs, are created and maintained. This attribute bounded list represents a plurality of indexable electronic documents, on a computer network, which are associated with a bounded attribute. For example, if the bounded attribute is a location, such as Washington, D.C., then the URLs in the attribute bounded list are associated with Washington, D.C. A plurality of computers associated with the bounded attribute are identified. An attribute bounded request is received from one of the computers. One or more of the URLs in the attribute bounded list are assigned to the requesting computer. The assigned URL is distributed to the requesting computer, and the requesting computer indexes electronic documents associated with the assigned URL.

In conventional distributed crawlers, identification and allocation of distributed processing tasks have been somewhat arbitrary. For example, conventional distributing computing models present problems in that the user of the client computer has no control over

which pages his computer crawls. Often the user's computing power will be expended as a result of crawling pages that are of no interest to the user.

By way of contrast with the claimed approach, a group of computers are identified that are associated with a common attribute ("bounded attribute"), such as a common location or interest defined by their users. Distributed processing tasks for indexing websites that are associated with the bounded attribute can be allocated to the group of computers. By grouping computers together and assigning these computers similar processing tasks to create an attribute bounded network, distributed processing tasks can be assigned according to a rational process, thereby increasing resource efficiency and facilitating the development of an attribute bounded community.

Emens is directed to a distributed crawler in which web browsers that access a search engine are allocated some crawling tasks. In Emens, a small program is loaded into the user's browser and it is directed to perform information gathering tasks, such as crawling a specified URL address for the search engine. When the user's computer initiates a search at a search engine, the user's browser will begin to crawl one or more of the webpages referenced in the search results. The crawled data is forwarded to the server.

Although Emens relates to a distributed crawler model, Emens does not relate to the claimed approach for creating an attribute bounded network. Specifically, Emens does not create and maintain a list of electronic document addresses associated with a bounded attribute. Moreover, Emens does not identify a plurality of computers associated with the bounded attribute and assign those computers electronic addresses from the attribute bounded list. Thus, with the claimed approach, computers with the same or similar bounded attributes can form a virtual community.

As such, Emens does not discuss all the limitations of the claimed invention, namely, creating an attribute bounded network of computers by:

- creating and maintaining a list of attribute bounded electronic addresses representing a plurality of indexable electronic documents on a computer network that are associated with a bounded attribute;
- identifying a plurality of computers associated with the bounded attribute;

- assigning one or more electronic addresses from the attribute bounded list by matching at least one of the electronic addresses in the attribute bounded list to at least one attribute from the attribute bounded request; and
- distributing the assigned electronic address to the requesting computer, where the requesting computer processes the distributed electronic address to index one or more electronic documents that are obtained through the assigned electronic address, as set forth in amended Claim 1.

Thus, Emens does not discuss every limitation of the claimed invention and, therefore, it is respectfully requested that the rejection of Claim 1 and its respective dependent claims under §102 be withdrawn.

Regarding Claims Rejections Under Section 103

Claims 3-6 were rejected under 35 U.S.C. § 103(a) based on Emens in view of U.S. Patent No. 6,732,141 to Ellis. Specifically, the Office alleges it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Ellis' distributed geographical search processing into Emens. The Applicant respectfully disagrees.

The Office correctly notes that Emens does not discuss an attribute being a geographical region. To address this claim limitation, the Office cites Ellis. Ellis describes a network having the capability of locating each computer accurately at the computer's position so that parallel processing occurs between computers as close together as possible. Hence, Ellis is using the geographical location of computers to measure distances between computers.

Ellis discusses the notion that computers located a short distance from one another are able to parallel process better than computers located a long distance from one another. The Office explains how to enhance the Emens' system using Ellis's approach by having the distributed processing performed closer to the user, thereby using less bandwidth and resulting in more efficient search processing.

Ellis, however, does not address the problem of limiting user processing (e.g., crawling, crawling) based on interest or relevancy. In contrast to the present invention, Ellis does not use a geographical location to measure interest in or the relevancy of electronic addresses, e.g.,

electronic documents. For example, electronic documents associated with businesses from the same geographical location as a particular geographic location associated with the requesting computer are more likely to be of more interest and of greater relevancy than electronic documents from another geographical location. In this way, the claimed approach can create geographically bounded networks in which electronic documents that are indexed by computers in the network are all associated with the same geographical location as the computer in the network.

Rather than using a geographical location to limit distributed processing by interest or relevancy, Ellis uses the geographical location to maximize network bandwidth utilization. Thus, Ellis does not suggest that a subset of electronic documents should be identified based on geography. By creating a geographically bounded network that includes documents identified based on a geographically bounded attribute, the claimed approach can optimize searching in the attribute bounded network based on geography and avoid false positives. Consequently, Ellis does not relate to the claimed attribute bounded network that includes a subset of electronic documents should be identified based on geography.

As such, even if there were motivation to combine Ellis and Emens, the resulting combination does not disclose the claimed invention. Therefore, it is respectfully requested that the rejections under §103 be withdrawn.

New Claims

New Claims 22 and 23 are being added to the application. New Claims 22 and 23 are not disclosed in the cited references for reasons similar to those set forth above, and therefore, new Claims 22 and 23 are also in condition for allowance. In addition, new Claim 22, which depends from Claim 1, further requires that the plurality of computers use peer-to-peer technology to form a virtual community associated with the bounded attribute. The cited references neither relate to a virtual community associated with a bounded attribute, nor do they relate to peer-to-peer networking.

Information Disclosure Statement

A Supplemental Information Disclosure Statement (SIDS) is being filed concurrently herewith. Entry of the SIDS is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Office feels that a telephone conference would expedite prosecution of this case, the Office is invited to call the undersigned attorney.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By 
James M. Smith
Registration No. 28,043
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133

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